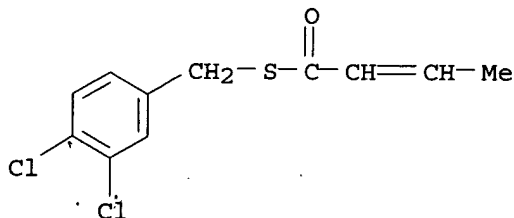


Gollamudi 09/833,047

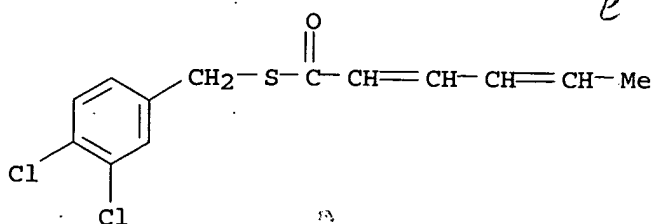
11/28/2005

TITLE: Fungicidal 3,4-dichlorobenzyl thioesters
 PATENT ASSIGNEE(S): Hokko Chemical Industry Co., Ltd., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|---|-------------|-----------------|-------------|
| JP 60115560 | A2 | 19850622 | JP 1983-223097 | 19831129 |
| PRIORITY APPLICATION INFO | | | | |
| OTHER SOURCE(S): CASREACT 103:214997 | | | | |
| ED Entered STN: 28 Dec 1985 | | | | |
| AB Title compds. I (R = H, alkyl) were prepared Thus, treating 19.3 g 3,4-Cl ₂ C ₆ H ₃ CH ₂ SH with 8.6 g AcCl in benzene gave 22.6 g I (R = Me) (II). II showed fungicidal activity at 0.25 kg/10 acre. | | | | |
| IC ICM C07C153-09 | | | | |
| ICS A01N037-02; A01N037-06; A01N037-36; A01N037-42; C07C153-11 | | | | |
| CC 25-18 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds) | | | | |
| IT Fungicides and Fungistats (dichlorobenzyl thioesters) | | | | |
| IT | 99229-33-1P | 99229-34-2P | 99229-35-3P | 99229-36-4P |
| | 99229-38-6P | 99229-39-7P | 99229-40-0P | 99229-41-1P |
| | 99229-43-3P | 99229-44-4P | 99229-45-5P | 99229-46-6P |
| | 99229-47-7P | 99229-48-8P | 99229-49-9P | 99229-50-2P |
| | 99229-51-3P | 99229-52-4P | 99229-53-5P | 99229-54-6P |
| | 99229-56-8P | 99229-57-9P | 99229-58-0P | 99229-59-1P |
| | 99229-61-5P | 99229-62-6P | 99229-63-7P | 99229-64-8P |
| | | | | 99229-65-9P |
| RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation and fungicidal activity of) | | | | |
| IT | 99229-46-6P 99229-47-7P | | | |
| RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation and fungicidal activity of) | | | | |
| RN | 99229-46-6 HCAPLUS | | | |
| CN | 2-Butenethioic acid, S-[(3,4-dichlorophenyl)methyl] ester (9CI) (CA INDEX NAME) | | | |



RN 99229-47-7 HCAPLUS
 CN 2,4-Hexadienethioic acid, S-[(3,4-dichlorophenyl)methyl] ester (9CI) (CA INDEX NAME)



L122. ANSWER 19 OF 86 HCAPLUS COPYRIGHT 2005 ACS on STN
 ACCESSION NUMBER: 1956:73735 HCAPLUS
 DOCUMENT NUMBER: 50:73735
 ORIGINAL REFERENCE NO.: 50:13808a-e
 TITLE: Thiol esters. I
 AUTHOR(S): Miyaki, Komei; Yamagishi, Saburo
 CORPORATE SOURCE: Chiba Univ.
 SOURCE: Yakugaku Zasshi, 119:502-507, 1999, 436-40
 CODEN: YKKZAJ; ISSN: 0031-6903

DOCUMENT TYPE: Journal
 LANGUAGE: Unavailable

ED Entered STN: 22 Apr 2001

AB p-EtO₂COC₆H₄CO₂H (5 g.) and 6 mL. SOCl₂ heated 1 h. at 90-100° and the product distilled in vacuo gave 5 g. p-EtO₂COC₆H₄COCl (I), b. 140-3°. I (5 g.), 2.6 g. PhSH, and 20 mL. C₅H₅N mixed at 0°, allowed to stand 1 h. at 50°, the product poured in ice water and recrystd. from EtOH gave 5 g. p-EtO₂COC₆H₄COSPh (II), columns, m. 99-101°. II (1 g.), 4 mL. 2N NaOH, and 8 mL. EtOH refluxed 30 min., the EtOH removed and the residue extracted with Et₂O gave 0.6 g. p-HOC₆H₄COSPh, m. 169-73° (from dilute EtOH). The following thiol esters are prepared from reaction of thiols and acid chlorides (thiol esters, b.p./mm. or m.p. given): MeCOSPh, 95°/7; MeCOSC₆H₄Me-p, 100°/5; MeCH₂CH₂COSPh, 120-2°/9; Me₂CHCOSPh, 127-9°/10; n-C₅H₁₁COSPh, 150-2°/13; n-C₇H₁₅COSPh, 165-8°; MeCH:CHCOSPh, 140-53°/5; Me(CH:CH)₂COSPh, 150-60°/5; MeCHClCH₂COSPh, 136-9°/10; MeCOSC₆H₄Br-p, 114°/6; MeCOSCH₂Ph, 120°/10; BzSCH₂Ph, 184-5°/7, m. 36-8°; PhCOSCH₂CONHC₁₀H₇-2, m. 162-3°; PhCOSPh, m. 55-6°; PhCOSC₆H₄Me-p, m. 75-6°; PhCOSC₆H₄Br-p, m. 84-5°; PhCH₂COSPh, 160-1°/3, m. 40°; 4-ClC₆H₄COSPh, m. 81.5-3.0°; 4-ClC₆H₄COSC₆H₄Me-p, m. 108-10°; 2-ClC₆H₄COSPh, m. 60°; 4-O₂NC₆H₄COSPh, m. 159-60°; 4-O₂NC₆H₄COSC₆H₅Me-p, m. 113-14°; 3-O₂NC₆H₄COSPh, m. 131-2°; 2-O₂NC₆H₄COSPh, m. 100°; 2-ClOH₇COSPh, m. 120-1°; 3,4-CH₂O₂C₆H₃COSPh, m. 83-5°; 2-HOC₆H₄COSPh (III), m. 54-5°; 2-AcOC₆H₄COSPh, m. 85-6°; 4-MeOC₆H₄COSPh, m. 93-5°; 4-AcOC₆H₄COSPh, m. 84-5°; PhCH:CHCOSPh, m. 76-8°; PhCH:CHCOSC₆H₄Me-p, m. 78-9°. Ph thioacetate and thiophenyl esters of aliphatic carboxylic acids inhibit the growth of fungi in 10⁻³ to 10⁻⁴M. On the other hand, the thiol esters such as PhCH₂ and Et thioacetate failed to show any antifungal activity, from which it is assumed that the antifungal activity lies in RCOSPh. In case of aromatic esters, besides BzSPh, III and 4-HOC₆H₄COSPh alone showed antifungal activity. Only about 8% of BzSPh is hydrolyzed into BzOH and PhSH by the enzymic preparation of *Willia anomala*. Even from this point, the appearance of antifungal activity seems to require the structure of RCOSPh.

CC 10 (Organic Chemistry)
 IT Fungicides or Fungistats

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File: JPAB

Aug 15, 1985

PUB-NO: JP360155102A

DOCUMENT-IDENTIFIER: JP 60155102 A

TITLE: SOIL GERMICIDE

PUBN-DATE: August 15, 1985

INVENTOR-INFORMATION:

NAME

COUNTRY

OOYAMA, HIROSHI

UMEDA, TEN

ARAKAWA, MASAZUMI

ASSIGNEE-INFORMATION:

NAME

COUNTRY

HOKKO CHEM IND CO LTD

APPL-NO: JP59009498

APPL-DATE: January 24, 1984

INT-CL (IPC): A01N 41/12; A01N 41/02; A01N 41/04

ABSTRACT:

PURPOSE: A soil germicide, containing a 3,4-dichlorobenzyl mercaptan as an active constituent, capable of exhibiting improved controlling effect on fusarium blights with low toxicity to humans and animals without requiring gas venting operation, etc., and capable of controlling with saved labor without giving phytotoxicity to crops.

CONSTITUTION: A soil germicide containing 3,4-dichlorobenzyl mercaptan expressed by formula I which is a well-known compound and a disulfide expressed by formula II which is an oxidized derivative thereof, a thiolsulfinate expressed by formula III, a thiolsulfonate expressed by formula IV, sulfinyl sulfone, sulfinic acid or sulfonic acid, etc. as an active constituent. The disulfide expressed by formula II is obtained by oxidizing the compound expressed by formula I with 1/2mol H₂O₂. Preferably, the above-mentioned germicide is formulated into an emulsion, sol, wettable powder, granule, powder, etc. for use. The germicide is very effective against fusarium blights such as fusarium wilt of cucumbers and tomatoes, blight caused by Fusarium oxysporum of eggplants, fusarium yellow of cabbages, etc.

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PATENT ABSTRACTS OF JAPAN

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(43)Date of publication of application : 22.06.1985

(51)Int.Cl. C07C153/09
A01N 37/02
A01N 37/06
A01N 37/36
A01N 37/42
C07C153/11

(21)Application number : 58-223097 (71)Applicant : HOKKO CHEM IND CO LTD

(22)Date of filing : 29.11.1983 (72)Inventor : OOHAMA HIROSHI
UMEDA TEN
ARAKAWA MASAZUMI

(54) 3,4-DICHLOROBENZYLTHIOL ESTER DERIVATIVE AND SOIL GERMICIDE

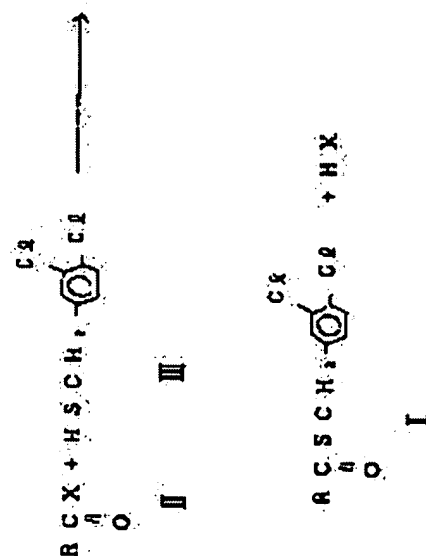
(57)Abstract:

NEW MATERIAL:A compound of formula I (R is H or alkyl which may be divided by O, S, etc. or substituted by halogen, phenyl or phenoxy).

EXAMPLE: S-3,4-Dichlorobenzyl thioacetate.

USE: A soil germicide very effective against fusarium wilt of cucumbers and tomatoes, blight caused by Fusarium oxysporum Schelechendahl, f. melongenae Matuo et Ishigami of eggplants, fusarium yellows of cabbages, etc. with very low toxicity to humans and cattle.

PREPARATION: An acid halide or an acid anhydride of formula II is reacted with 3,4-



dichlorobenzyl mercaptan of formula III to give the aimed compound of formula I. The reaction is preferably carried out using a solvent, which is not essential. The compound of formula I is a soil germicide without giving phytotoxicity to crops nor requiring gas venting operation, etc. and contributing to controlling with saved energy.

LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's
decision of rejection]

[Kind of final disposal of application
other than the examiner's decision of
rejection or application converted
registration]

[Date of final disposal for application]

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decision of rejection]

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